

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

JUN 17 1940

Date of writing Report 19 When handed in at Local Office 27 JUN 1940 Port of HULL
 No. in Survey held at Hull Date, First Survey 20.6.39 Last Survey 1.6.1940
 Reg. Book. on H.M.T. "BLACKTHORN" (Number of Visits 59)
 Built at Beverley By whom built Cook, Wilton & Gemmell, Ltd. Yard No. 653 When built 1940-4
 Engines made at Hull By whom made Charles D. Holmes & Co., Ltd. Engine No. 1555 When made 1940-4
 Boilers made at - By whom made - Boiler No. - When made -
 Registered Horse Power ✓ Owners The Admiralty Port belonging to -
 Nom. Horse Power as per Rule 156 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted Yes
 Trade for which Vessel is intended ✓

ENGINES, &c.—Description of Engines Triple Expansion CONTRACT Revs. per minute 160
 Dia. of Cylinders 13 1/2 - 23 - 38 Length of Stroke 27 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals 7.5" as per Rule 7.5" Crank pin dia. 7 7/8" Crank webs Mid. length breadth ✓ Thickness parallel to axis 4 13/16"
as fitted 7 7/8" Mid. length thickness ✓ Thickness around eye-hole 3 15/16"
 Intermediate Shafts, diameter as per Rule 7.15" Thrust shaft, diameter at collars as per Rule 7.5"
as fitted 7 1/4" as fitted 7 7/8"
 Tube Shafts, diameter as per Rule 8 1/2" Screw Shaft, diameter as per Rule 8 1/4" Is the tube shaft fitted with a continuous liner ✓
as fitted 8 1/4" as fitted 8 1/4" Is the screw shaft fitted with a continuous liner No
 Bronze Liners, thickness in way of bushes as per Rule ✓ Thickness between bushes as per Rule ✓ Is the after end of the liner made watertight in the
as fitted ✓ as fitted ✓ propeller boss ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓
 If two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft Yes If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 36 1/2"
 Propeller, dia. 105" Pitch 9'-4" No. of Blades 3 Material C.I. whether Moveable No Total Developed Surface 30 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 1/2" Stroke 15" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 1/2" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size One 4 x 6 x 12 Weirs Pumps connected to the { No. and size One - 6 x 5 1/2 x 15" Weirs } Also
 { How driven Independent Steam Main Bilge Line { How driven Independent Steam } Downton
 Ballast Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size None
 Are two independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room Eng. Room. 2 @ 2" dia. & one @ 2 1/4" dia. Stroke hold. 2 @ 2" dia.
 In Pump Room None In Holds, &c. One @ 2" dia. in each of the following Forepeak,
Chain locker, Aftie space, Magazine, Spirit Room, Bunkers, Shaft space & after peak.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One - 5" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One @ 2 3/4" included above Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate No
 What Pipes pass through the bunkers Feed tank Suctions How are they protected Wood casing
 What pipes pass through the deep tanks None Have they been tested as per Rule ✓
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
 compartment to another Yes Is the Shaft space watertight Yes Is it fitted with a watertight door No worked from access from
flat above.

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2650
 Is Forced Draft fitted Yes No. and Description of Boilers One S.B. Working Pressure 200 lbs/0"
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
 Is the donkey boiler intended to be used for domestic purposes only ✓
PLANS. Are approved plans forwarded herewith for Shafting 17.7.39 Main Boilers 17.7.39 Auxiliary Boilers None Donkey Boilers ✓
 (If not state date of approval)
 Superheaters None General Pumping Arrangements 17-10-39 Oil fuel Burning Piping Arrangements None
SPARE GEAR.
 Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied See attached list.

The foregoing is a correct description.
FOR CHARLES D. HOLMES & CO., LTD.

[Signature]

Manufacturer.



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NOTE.—The words which do not apply should be deleted.

During progress of work in shops --- 1939. June 20, Aug. 15, Sept. 5, 6, 20, 27, Oct. 3, 11, 14, 18, 24, 26, Nov. 1, 14, 15, 17, 21, 22, 23, 24, 27, 28, Dec. 7, 8, 9, 18, 21, 29, 1940. Jan. 5, 8, 9, 12, 15, 18, Feb. 1, 4, 5, 8, 11, 12, 15, 19, 20, 20, 25, 29, Apr. 18, May 10, 15, 24, 25, 25, 29, 31. June 1.

Dates of Survey while building --- 1940. Jan. 5, 8, 9, 12, 15, 18, Feb. 1, 4, 5, 8, 11, 12, 15, 19, 20, 20, 25, 29, Apr. 18, May 10, 15, 24, 25, 25, 29, 31. June 1.

Total No. of visits 59.

Dates of Examination of principal parts—Cylinders 24/11/39 Slides 26/10/39 Covers 15/11/39
 Pistons 15/11/39 Piston Rods 15/11/39 Connecting rods 15/11/39
 Crank shaft 8/12/39 Thrust shaft 8.9.39 2 Intermediate shafts 15/11/39
 Tube shaft ✓ Screw shaft 15-11-39 Propeller 28/11/39
 Stern tube 28/11/39 Engine and boiler seatings 28/11/39 Engines holding down bolts 5/3/40

Completion of fitting sea connections 28/11/39
 Completion of pumping arrangements 15/5/40 Boilers fixed 5/3/40 Engines tried under steam 31/5/40
 Main boiler safety valves adjusted 28/3/40 Thickness of adjusting washers T. 15/32" S 1/32"

Crank shaft material Steel Identification Mark 1733 AEG. 27.7.39 Thrust shaft material Steel Identification Mark 1736 J.D. 9.8.39
 2 Intermediate shafts, material Steel Identification Marks 1737 J.D. 15.11.39 1448 DLHC. 22.11.39 Tube shaft, material Steel Identification Mark 1448 DLHC. 8.12.39

Screw shaft, material Steel Identification Mark 1448 DLHC. 15.12.39 Steam Pipes, material Steel Test pressure 60 lbs Date of Test 19/3/40

Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F. ✓
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. If so, have the requirements of the Rules been complied with ✓
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery duplicate of a previous case yes. If so, state name of vessel H.M.T "BIRCH" - Reg. No 50672.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed & fitted on board in accordance with the approved Admiralty plans, The Specification and the Society's Rules. The workmanship and materials are good & when tried under full working conditions at sea, it was found satisfactory in every respect. A I.H.P of 864 @ 169 R.P.M. was obtained. 1130 IHP @ 185 R.P.M. The Stems for this vessel have been checked on board. This vessel is eligible in my opinion, when classed to have the records of L.M.C. - 6.40. & O.6 & the notations T. 3cy. 13 1/2, 23 & 38 156 NHP 200 lbs 158. 3 of G.S. 63 HS 2650 F.D.

The amount of Entry Fee ... £ : : When applied for, 7 JUN 1940
 Special ... £ 90 : 0 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When received, 8th July 1940 R.D. 8/4

Committee's Minute TUE. 18 JUN 1940
 Assigned + Lmb. 6.40
 J.D., O.G.

D. J. W. Johnson
 Engineer Surveyor to Lloyd's Register of Shipping.



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Hull. 50672.